DOCUMENT RESUME

ED 287 855 TM 870 489

AUTHOR Dodd, Alan; Shaughnessy, Michael F.
TITLE The Assessment of Study Skill Behavior.
PUB DATE 30 Apr 87
NOTE 17p.; Paper presented at the Annual Meeting of the Rocky Mountain Psychological Association (Albuquerque, NM, April 30, 1987).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS College Freshmen; *Course Evaluation; Higher Education; Knowledge Level; Multiple Choice Tests; Pretests Posttests; *Remedial Instruction; Student Behavior; *Study Habits; *Study Skills; *Test Construction
IDENTIFIERS ACT Assessment

ABSTRACT

This study evaluated the acquisition of study skills in high-risk college freshmen enrolled in a developmental course, "Introduction to University Studies." The construction of the 30-item multiple choice instrument was described. The test reflected the objectives of the course, covering traditional study skill topics such as self-assessment, time management, memory, reading, note-taking, test-taking, and creativity, as well as personal concerns such as relationships, money, resources, careers, and health. Thirty students required to enroll in the course were given pre-tests and post-tests. Their performance was compared to that of 29 students who were not required to take the course because of higher American College Test scores. Significant gains from pre-test to post-test were obtained. Comparison with the students who were not required to take the course showed parallel scores. The importance of other variables such as grade point average and utilization of skills on success in college should be considered. Tables related to test reliability are included, and the 30-item evaluation is appended. (MDE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED287855

Paper presented at the Rocky Mountain Psychological Association, Albuquerque, New Mexico, April 30, 1987.

The Assessment of Study Skill Behavior

by

Alan Dodd

Michael F. Shaughnessy

Eastern New Mexico University

Psychology Department

Portales, New Mexico 88130

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

M F Shaughnessy

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

TM 870 480

BEST COPY AVAILABLE

Abstract

Study skills have become an increasingly important area of interest in developmental and remedial education classes. However, little empirical research exists on the assessment and measurement of basic study skills.

The present study examines this area and utilizes a pilot pre-test, post-test with a group of freshmen students enrolled in developmental classes. Results are reported and implications reviewed. Concerns relative to the assessment of study skill behavior are discussed.

Developmental and remedial/study skills courses have become increasingly prominent at colleges and universities in the United States. They have been implemented to remediate the needs of a significant number of beginning freshmen who lack critical academic/study skills necessary for college level demands.

The assessment of study skill behavior has been only tangentially addressed in the literature. It is generally presupposed that poor students have poor study skills and that good students have better reading, note-taking and outlining skills. Assessing such skills has been extremely problematic. One study, by Glover and Shaughnessy (1983) attempted to predict course performance via an analyses of note-taking ability. They found it extremely difficult to obtain inter-rater reliability as to what constituted "good" notes. Multiple criteria of organization, specificity, construct analysis and evaluation may be necessary in future studies. Further, Shaughnessy and Evans (1986) explored note taking ability while holding word knowledge, world knowledge and reading rate and comprehension constant. Glover, Bruning, Filbeck and Plake (19) have been able to increase on target note-taking skills via reinforcement. However, they did not address the skill/behavior issue.

Students entering a Southwestern university who are considered a "high risk" group, have ACT composite scores of 14 or less are required to enroll in a two hour developmental class "ACS 101 - Introduction to University Studies." The class addresses important academic skills and personal concerns as they interrelate and effect successful functioning in college.

The present study attempts to evaluate the degree to which a group of students enrolled in this developmental course learn key concepts and techniques taught in the course. This was effected by a pre and post test methodology. As an additional inquiry, a random selection of beginning freshmen having ACT composite scores of 15 and above were tested for comparison with the 14 and under group.

The course utilized the text Becoming a Master Student by Dave Ellis. In addition to the necessary study/learning skills of time management, memory, reading, note taking, test taking, creativity, and resource utilization, personal concerns of relationships, money and health are also addressed in this text.

A. Instructional Objectives and Table of Specifications

Instructional objectives were determined by a combination of experience in teaching the course, and the areas of content to which students seemed naturally to gravitate, presumably because of need. The objectives, while not representing the entire course content, are major areas of emphasis and consist of important primary concepts and skills.

The table of specifications destributed the test items fairly equally within the course content. Basically two levels of cognition were required; identificational knowledge and comprehensive understanding.

B Instrument

In developing an effective test, the summative nature of pre-post testing necessitates the selection of key content material that would represent the essence of the course. It would be unreasonable to expect students to gain a comprehensive understanding, and to retain the quantity of material, contained in the entire text. Consequently, it was necessary to decide exactly what quantity and what content to include on the test. The domain, then, would adequately sample the most critical concepts and skills that would best represent the essence of the text.

The multiple-choice format was selected because of several advantages:

1. Ease of scoring (approximately 100 tests.
2. Popular, comfortable format.
3. Reliability/Validity.
4. Appropriate for cognitive levels of knowledge and comprehension.

It needs to be emphasized that although the test items require the basic level of knowledge response, the course content utilizes a variety of exercises and activities in presenting that content. To identify a correct answer will not necessarily be the result of simple memorization but could well represent identification of a process in which the student used higher levels of cognition.

An item analysis for difficulty and discrimination revealed that twelve (40%) of the thirty test items can be

retained with no charge. Eight items (27%) needed revision to include stem and possibly distractor. The remaining ten (33%) need slight changes in distractors.

C. Results

The instrument was administered as a pre-test to a group of 30 students placed in the course "Introduction to University Studies" at the beginning of the semester (Fall 1986). The same instrument was administered as a post-test at the end of the semester. Table 1 presents the raw scores of the pre-post tests and the "above 14 ACT" group.

The results indicate a significant gain between pre and post testing. Based on the calculations of each individual standard error of measurement, approximately 80% of the students made a true gain; 66 2/3% fell with 2Se, or a 95% certainty, while 13% were at 1Se, a 68% certainty. The results of the dependent T test produced a critical value of 1.70 at a .05 level of significance. The calculation value of 6.96 indicates a significant gain.

Test Scores
(100 Point Scale)

	Pre-Test Aug. 1986	Post-Test Dec. 1986	Above 14 ACT Composite
1.	77	90	83
2.	77	90	77
3.	70	90	73
4.	70	90	70
5.	67	87	67
6.	67	87	63
7.	63	87	63
8.	63	83	63
9.	63	83	63
10.	60	80	63
11.	60	80	60
12.	57	77	60
13.	57	77	60
14.	53	77	60
15.	53	73	60
16.	53	73	57
17.	50	70	57
18.	50	70	57
19	47	67	53
20.	47	63	53
21.	43	60	53
22.	43	60	53
23.	40	60	50
24.	40	57	50
25.	37	57	47
26.	37	50	43
27.	37	47	40
28.	33	47	40
29.	33	43	30
30.	23	40	30

Table I

Correlation between pre and post tests was .97. An additional calculation utilizing the split-half method resulted in a correlation of .98. An odd-even division of the test items was effected for the split-half calculation, which also included the formula for correction. The comparison data is presented in Table II.

As a means of evaluating cumulative acquistion of study skills content upon entering college, a review of responses provides some interesting information (Table III). Questions concerning self assessment of educational needs and concepts of personal responsibility indicate that students within this group may lack an adequate understanding of their educational strengths and weaknesses. Incongruity between high school G.P.A and actual achievement may be a contributing factor (Popham, 1981). Reading, memory and career responses also indicate a need for emphasis in those areas. Although other areas did show a greater percentage of positive responses, in actual teaching students reveal needs that are inconsistent with those percentages. The test items, being derived from a table of specifications, are considered valid for the domain sampled. As a result of item analysis, however, refinement and changes in certain test items will improve their effectiveness.

Comparison Data
(100 Point Scale)

	Pre-Test	Post-Test	Above 14 ACT Composite
Number of students	30	30	29
Range	52	70	53
Median	53	73	60
Mode	37,53,63	90	60,63
Mean	52	70	58
Standard Deviation	13.36	14.98	

Score Distribution

Pre-Test
60% Plus & Mins 1 Standard Deviation
96% Plus & Minus 2 Standard Deviations

Post-Test
60% Plus &bMinus 1 Standard Deviation
100% Plus &b Minus 2 Standard Deviations

Correlation

Pre-Test, Post-Test Correlation r = .97
Split Half Correlation: Pre-Test r = .98

Dependent T Test

Critical Value = 1.70 at 5% .05
Calculation Value = 6.96

Table II

Table III

Pre-Test

	% of Responses Correct	% of Responses Incorrect
Self-Assessment	19	81
Time Management	80	20
Memory	40	60
Reading	37	63
Note Taking	62	38
Test Taking	64	36
Creativity (Papers & Speeches)	72	28
Relationships	49	51
Health	93	7
Money	69	31
Resources	59	41
Careers	3	97

An additional group of freshmen students were tested for comparison. This group consisted of students not enrolled in ACS-101 classes, whose ACT composite scores were 15 and above; ACT scores ranged between 15 and 25. Viewing the comparison graph shows an interesting parallel of scores between the ACS and "outside" group. Although the "outside" group scores are consistently higher, the difference does not appear to be

strikingly significant. It may be that other variables not measured in this study have more to do with college success than basic skills such as vocabulary, reading and general information. For example, in investigating college g.p.a., it was found by Shaughnessy and Evans (1986) that high school g.p.a. is a better predictor of college g.p.a. than isolated academic skills. It should also be indicated that a student's knowledge of note taking, underlining, outlining and other study skill behaviors does not insure that said student will in fact actually utilize these skills.

D. Conclusion

This study indicates that the test was reliable in measurement of the acquisition of general concepts/techniques of study skill behavior as they relate to a particular text. Additional research could utilize a larger number of students with an attempt to universalize content validity by a synthesis of a variety of texts. Such information may provide important concurrent validation for whatever method may be utilized to place students in certain developmental courses. Refinement of the study skills instrument could also provide a means of additional predictive validity assessment. In addition, future research can determine the extent to which these gains in study skill behavior may translate into college success.

References

Ellis, C. B. (1985) Becoming a Master Student. Rapid City, South Dakota: College Survival Inc.

Glover, J. A., Zimmer, J. W. Filbeck, R. W. and Plake, B. S. (1980) Effects of training students to identify the semantic base of prose materials. Journal of Applied Behavior Analysis 13, 655-667.

Popham, W. J. (1981) The case for minimum competency testing. Phi Delta Kappa, Vol. 63 No. 2.

Shaughnessy, M. F. and Evans, R. (1985) The Educational Psychology of Note-Taking. Paper presented at the Rocky Mt. Educational Research Association. Nov. 1985, Albuquerque, N.M.

Shaughnessy, M. F. and Evans, R. (1986) Word/World Knowledge: Prediction of College GPA. Psychological Reports 59, 1147-1150.

Williams, R. L. and Long, J. D. (1979) Toward a self-managed lifestyle. Second Edition. Boston: Houghton Mifflin.

ACS 101-Introduction to University Studies

Evaluation

Circle the letter representing the correct answer.

1. Brainstorming can produce creative ways of finding

   A. Problems
   B. Situations
   C. Patterns
   D. Solutions

2. To concentrate completely on the task at hand is to

   A. Be here now
   B. Be concerned
   C. Be somewhere
   D. Be convinced

3. A good source for career information is

   A. EEO
   B. ABC
   C. BBB
   D. DOT

4. Short-term, mid-term, and long range are elements of

   A. Time management
   B. Goal setting
   C. Work schedules
   D. Strategic planning

5. A confident, respectful person will at times need to be

   A. Assertive
   B. Apologetic
   C. Aggressive
   D. Domineering

6. The problem most people have with memory is

   A. Forgetting
   B. Detail
   C. Review
   D. Recall

7. An important factor in developing relationships is to be a good

   A. Friend
   B. Communicator
   C. Listener
   D. Person

8. Mnemonic devices are tools to aid in

   A. Reading
   B. Recall
   C. Writing
   D. Research

9. A first step in getting the most out of education is an accurate assessment of

   A. Finances
   B. Deficiences
   C. Strengths
   D. Motivation

10. Which of the following is <u>not</u> most effective for exam preparation?

    A. Scanning
    B. Study group
    C. Weekly reviews
    D. Cramming

11. Previewing, outlining, underlining, reviewing are good techniques for effective

    A. Speaking
    B. Writing
    C. Reading
    D. Testing

12. Confrontation or conflict can be diffused greatly by beginning statements with

    A. "I"
    B. "They"
    C. "You"
    D. "He/She"

13. The concept of "you create it all" refers to individual

    A. Property
    B. Responsibility
    C. Creativity
    D. Differences

14. When creating papers or speeches, the most important element is selecting a

    A. Book
    B. Place
    C. Time
    D. Topic

15. One way to avoid regression when reading is through

A. Synergy
B. Concentration
C. Vocabulary
D. Summary statements

16. Refining a paper is accomplished by careful

A. Rewording
B. Revision
C. Re-reading
D. Reviewing

17. Solving an addiction to drugs or alcohol begins by

A. Hiding it
B. Stopping it
C. Admitting it
D. Decreasing it

18. Effective time management can increase

A. Work
B. Resources
C. Productivity
D. Satisfaction

19. Being assertive is sometimes mistaken as being

A. Complacent
B. Aggressive
C. Competitive
D. Accomplished

20. Effective note-taking involves the process of

A. Recite, review, recite
B. Observe, record, review
C. Listen, read, write
D. Record, read, observe

21. Which of the following is <u>not</u> a time management technique?

A. Daily calendar
B. "To-do" list
C. Prioritizing
D. Decentralizing

22. The first step in writing an essay exam is to write out

A. Major points
B. The question
C. An outline
D. The answer

23. If complete education addresses the whole person, it is important to consider the

A. Fourth dimension
B. Spiritual dimension
C. Entire dimension
D. Small dimension

24. A well constructed speech will usually consist of

A. One main part
B. Two main parts
C. Three main parts
D. Four main parts

25. The Readers Guide to Periodical Literature is the source for information in

A. Magazines
B. New Books
C. Microfilm
D. Libraries

26. Which of the following is <u>not</u> an effective memory technique?

A. Recitation
B. Visualization
C. Association
D. Relaxation

27. Without review, 80% of what is read usually cannot be recalled after

A. 2 hours
B. 24 hours
C. One week
D. Several days

28. One of the best remedies for test anxiety is adequate

A. Resources
B. Time
C. Preparation
D. Rest

29. The most common form of note-taking organization is

A. Outlining
B. Underlying
C. Mind mapping
D. Handwriting

30. A budget is most needed when funds are

A. Inadequate
B. Adequate
C. Normal
D. Moderate